Southern Rivers Catchment Management Authority is making a significant commitment to rehabilitating the largest river in the Southern Rivers region - the Shoalhaven. The removal of riparian vegetation and degradation from stock access and waterway users has led to the need for major riverbank rehabilitation.

Areas of the lower Shoalhaven, where estuarine processes interact with coastal processes, are more prone to erosion. Shoalhaven Heads and Berrys Canal are examples of highly dynamic areas of this estuary system, with sheer earth cliffs climbing four to five metres above the high tide mark demonstrating the scale of degradation.

**What is being done?**

Step 1—Develop long term management agreements with landholders to ensure sound management of sites following construction and revegetation

Step 2—Reshape steep eroded banks and construct a rock wall using battering, a geo-textile base to prevent slumping, and different sizes of rock to absorb wave energy.

Step 3—Plant Casuarina (Oak) trees along the bank behind the rock wall, plant mangroves in front of the rock wall, and construct fences to keep stock from damaging banks and grazing on riverside vegetation.

Step 4—Maintain vegetation until it is self-sustaining.

**Why is it being done?**

A number of sites identified in the Shoalhaven River Foreshore Definition Study were narrowed down to two priority sites when all project partners met to discuss the project. The sites were selected because they were identified by local authorities and Shoalhaven Riverwatch as the worst erosion sites in the Shoalhaven lower floodplain.

Sediments, lack of habitat and loss of land impacts upon farmers, oyster growers and recreational users as well as the health of the River itself. The enhancement of in-stream and riverbank habitat will have benefits for all River users.

**What are the outcomes?**

Rehabilitation works are vital on this section of the River to:

- prevent the further loss of productive agricultural land
- reduce erosion and sedimentation which will protect aquatic ecosystems
- stabilise river banks for revegetation of inter-tidal and riparian vegetation, providing valuable habitat
- improve water quality through exclusion of stock.

**Who is involved?**

SRCMA is working in partnership with:
- Shoalhaven Riverwatch
- Shoalhaven City Council
- NSW Department of Fisheries
- NSW Department of Natural Resources
- Local landholders

**Why this approach?**

The sheer scale of erosion on the selected sections of riverbank meant simple revegetation and fencing would be inadequate in addressing this ongoing problem.

The decision to use a combination of battering, different sized rocks, geo-textile and revegetation is the result of a technical understanding of river geomorphology and years of observation of other erosion control works on the River.

Several attempts have been made to stem erosion over the past 50 years with varying levels of success. This latest attempt demonstrates an appreciation for the changed river flows (wider channel, less freshes) and waterway use (more boats, bigger waves) and lessons learned from previous efforts.

**What are the results?**

- 550 metres of erosion control works on the north side of the Shoalhaven River where Broughton Creek meets the River
- 600 metres of erosion control works at O'Keefe Point where Berrys Canal and the Shoalhaven River meet
- 2 kilometres of stock-proof fencing
- 2 kilometres of riparian vegetation including mangroves planted and maintained
Project funding
A total of $189,000 has been expended to date on project activities jointly funded by the Australian Government’s Natural Heritage Trust, NSW Government, landholder and in-kind contributions. In addition to this, landholders will contribute a further $25,000 in maintenance and lost pasture productivity over the period of the agreement. Riverwatch and Landcare groups provide additional in-kind support by maintaining plants used in the revegetation component of the project works.

Value adding
- The major erosion control works link with the riparian revegetation activities carried out by Charlie Weir (Riverwatch). Plants are purchased at cost and Mr Weir plants and maintains the majority of plants.
- Fencing constructed under the agreements will not only keep cattle from damaging the riverbanks but will reduce effluent input into the River.

What are the challenges?
Managing risk
The Shoalhaven River, particularly around Berrys Canal is a highly dynamic river with large tidal movements. These dynamics increase the risk to any works undertaken and the impacts of those works on adjacent areas. Works need to be well planned to take these risks into account.

Cost of materials
The rising cost of raw materials restricts the number of sites on which this scale of erosion control can be undertaken.

What are the lessons?
Invest appropriately
Investment in high quality erosion control works will reduce the need to repeat the works in years to come.

Integrated solutions
Isolated solutions are often inadequate—building rock walls without excluding stock results in ongoing damage to the riverbank and in some areas the rock wall itself.

Landholder understanding
Using historical examples on the River, landholders can learn about the benefits of investing in erosion control on their properties.

Contact
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